-- An extruded component made of fibre-reinforced thermoplastic materials, in particular a screw (1) that contains a corresponding proportion of fibres. Carbon fibres shaped as endless fibres extend in an at least approximately parallel direction to the centre line of the screw (1) in the area of the head (2) of the adjacent thread turns of the shaft (5). At the surface of the remaining part of the threaded portion, the fibres follow the contour of the thread in the axial direction of the part. The fibres in the core of this section next to the end of the screw are distributed in an increasingly random manner towards the free end of the screw.

On page 1, below line 3, insert the following subheading.

-- BACKGROUND OF THE INVENTION --

On page 2, between lines 20 and 21, insert the following subheading.

-- BRIEF DESCRIPTION OF THE INVENTION --

On page 10, before line 1, insert the following subheading.

-- BRIEF DESCRIPTION OF THE DRAWINGS --

On page 10, delete the paragraph which starts on line 26 with the expression "Fig. 7" and continues to line 26 on page 11, and substitute therefor the following three new paragraphs separated by a new subheading.

-- Fig. 7 a top view of a component manufactured using the push-pull extrusion process, which can be specifically used as an osteosynthesis plate.

DETAILED DESCRIPTION OF THE INVENTION

In the following explanation of the process according to the invention, as well as of the components manufactured according to the process, it is assumed that the component (in accordance with Figures 1 to 5) is a connection element, particularly a screw, which is specifically used in medical technology, in other words as a corticalis screw or spongiosa screw, for example, or that the component (in accordance with Figures 6 and 7) is a mounting part, particularly an osteosynthesis plate for interacting together with a connection element as mentioned above.

Within the scope of the invention, of course, other components are also included, if they consist of fiber-reinforced thermoplastic materials and are manufactured in a process according to the invention. The use of such components is not limited only to medical technology. It is certainly possible to use such components also in other areas of application, such as in machine construction, in electrical technology, in aerospace technology, in civil engineering, etc. The components do not always necessarily have to be manufactured in the form of connection elements (screws), but can also be used as components with completely different design forms, such as rails or plates, for example. It would be possible, for

example, to equip the components made of fiber-reinforced thermoplastic materials, which are probably not structured as self-tapping screws, with a corresponding drill section, which can also be made from biocompatible material, if necessary, or can easily be removed after the drilling process. Under some circumstances, such removal would not even be necessary in various areas of application. The example is also explained on the basis of a fiber-reinforced thermoplastic material which is produced with endless fibers with a volume proportion of more than 50%. Using the process according to the invention, however, it is just as advantageous to process fiber-reinforced thermoplastic materials which contain only short fibers or long fibers or combinations of proportions of short, long, and/or endless fibers. The process according to the invention can also be successfully used with a fiber proportion of less than 50 volume-% in the blank. --

On page 11, delete the paragraph which starts on line 27 with "The connection element" and continues to line 16 on page 12 and substitute therefor the following new paragraph.

-- The connection element shown in the drawing, in the form of a screw 1, essentially consists of a head 2, an engagement part 3 for force introduction by a turning tool, and a shaft 5 provided with a thread 4. As is particularly evident from Fig. 2 of the drawing, the main point of the screw 1 is the progression of the endless fibers 6. By means of fibers

aligned in locally targeted manner with the structure, the screw 1 has different degrees of rigidity, adjusted in locally targeted manner. This makes it possible to adapt the rigidity to the natural structure of a bone, particularly when the screw is used as a corticalis screw. By selection of a laminate of thermoplastic materials with carbon fibers, a light, x-ray-transparent, and biocompatible connection element can be created. The particular advantage of such a screw lies in the fact that the rigidity and the rigidity gradients can be better adapted to the natural structure of the bone than in the case of conventional metal screws. By means of the fiber structure, a better force distribution is guaranteed, i.e. not only the first three screw turns are the bearing parts. Furthermore, the connection element does not hinder conventional medical examination methods, since it is non-magnetic and x-ray-transparent. This is a particular disadvantage of conventional metal implants, including connection elements. They can make the examination findings of modern diagnostic methods, such as computed tomography and magnetic resonance imaging, totally useless. --

On page 14, delete the paragraph which starts with the words "In research work" on line 1 and substitute therefor the following new paragraph.

-- In research work in this field, it was found that only when using bone screws made of thermoplastic materials reinforced with carbon fibers and, in this connection, by means of the manufacturing process according to the invention, was it possible to create an